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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/529,919	04/21/2000	Akinori Furuya	032590-055	2803

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EXAMINER

PSITOS, ARISTOTELIS M

ART UNIT	PAPER NUMBER
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2651

DATE MAILED: 12/21/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/529,919	Applicant(s) FURUYA ET AL.	
	Examiner Aristotelis M Psitos	Art Unit 2651	

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Applicants' response of 10/25/01 has been received, entered and the following action is made in response.

The IDS of 10/18/01 has been received and made of record.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations of claims 6 and 8 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. The examiner fails to see any description with respect to the thickness recited. ✓

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The examiner is not certain as to what "loads" refers to in this claim. What further limitation (structure) of a record medium is applicant attempting to define?

Response to Arguments

Applicant's arguments filed 10/25/01 have been fully considered but they are not persuasive. Applicants' response on where the "loads" are found in the disclosure have been considered, unfortunately the examiner is not certain as to what constitutes a "load". In the following rejections the examiner interprets such as being the transparent layer.

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AS FAR AS THE CLAIMS RECITE POSITIVE LIMITATIONS THE FOLLOWING ART REJECTIONS ARE MADE.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 2, 4-9, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimokawa et al further considered with Nakamura et al.

The reference to Shimokawa et al discloses an MO record, having a substrate and a multi recording layer as well as a reflective layer, these last two layers upon the substrate.

Although the recording layer of Shimokawa et al can indeed be multi-layered the types of layers are not specified as claimed.

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The ability of having a spinel ferrite recording layer as part of a mo recording medium is acknowledged by the reference to Nakamura et al – see his table two for instance.

It would have been obvious to one of ordinary skill in the art to modify the system of Shimokawa et al with the teaching from Nakamura et al motivation is to provide for an appropriate under-reflecting layer of the material specified in claim 1 to provide for appropriate signal reflection from the reflective under layer.

The limitations of claims 4 & 5 are depicted in these references and no further analysis is made thereto.

With respect to the thickness values – applicant's attention is drawn to col. 2 line 45 to column 3 line 15 of Shimokawa et al.

With respect to claims 9 & 11, Nakamura et al provides for the grooved substrate as well as a protective layer.

Response to Arguments

Applicant's arguments filed 10/25/01 have been fully considered but they are not persuasive. Although applicants' arguments focuses on what problem he is solving, no such limitation/distinction is found/recited in the claim. Hence the argument fails to distinguish over the combination of references.

5. Claims 3 & 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 1 above, and further in view of JP 5-303776.

The particular limitation of claims 3 and 12 are considered obvious over the above base references considered with JP 5-303776.

Placing grooves on the top of a mo record medium is taught in the JP document, and from such a teaching, provision of such grooves on the top reflecting film of Shimokawa et al would lead to the limitation of claim 3, that is only the garnet recording layer is found between the tracks - in the groove section.

The use of grooves for tracking purposes is well known and whether one put the such grooves (relocated) on the top surface as opposed to the bottom surface is considered merely a relocation of elements without leading to any unexpected results and an obvious variant.

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Response to Arguments

Applicant's arguments filed 10/25/01 have been fully considered but they are not persuasive. No specific arguments have been presented with respect to this combination of references; the examiner maintains his previous position.

6. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 1 above, and further in view of Terao et al.

The ability of having heat treatment for the manufacturing of mo record media is acknowledged by the Terao et al reference. Such treatment is considered part of the manufacturing steps required.

As to the specific values recited in these claims, although no such value(s) is found in Terao et al, such limitations are considered to be merely optimization of system parameters and obvious to those of ordinary skill in the art. The temperature range/value for the heat treatment would be evaluated in order to yield an optimum manufacturing result. No unexpected results are seen to occur from such optimization.

It would have been obvious to one of ordinary skill in the art to modify the system of the prior art as applied with respect to claim 1 with the teaching from Terao et al, motivation is to optimize the manufacturing heat treatment process.

Response to Arguments

Applicant's arguments filed 10/25/01 have been fully considered but they are not persuasive.

Applicants' arguments with respect to the specific temperature range are not persuasive. The examiner agrees no such range is found in the reference, but considers such a range merely as optimization of parameters. If applicants are arguing that this specific temperature range is significant, then the examiner
✓ would PRESENT A RESTRICTION REQUIREMENT because such limitations are outside this examiner's expertise, and hence these claims would be focusing on a manufacturing or treatment step NOT FOUND IN THE PRODUCT CLAIMS and hence restrictable. The examiner indicated that if applicants amended these claims, such a possibility would be introduced. Applicants have not elected which invention to prosecute in his above dated response, and hence the examiner has concluded that there is no patentable distinction there between. Nevertheless, this position and RESTRICTION WOULD BE MADE

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If applicants can convince the examiner that these claims are indeed drawn to a difference inventive feature – i.e., one more than mere optimization of parameters.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1,2,4,5, 9 – 12 are rejected under 35 U.S.C. 102(b) as being anticipated by either EP 196,322; JP 60-150,614; JP 60-107,815; JP 60-200,887; WO 8502292; or Gomi et al

These references are relied upon for the reasons found in the search report of the WO 0013178 document. The examiner makes this conclusion based on the fact that no arguments have been presented in the above communication that the claims as presented are distinguishable over the claims in the WO document. The examiner recommends to applicants that if such is not the case (the examiner is not familiar with the JP language to make any comparison) then applicants point out how and where such distinctions are found in the pending claims.

9. Claims 1, 2, 4, 6, 7, 8, 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Machida.

Machida discloses an MO record product wherein a plurality of recording layers is found upon a substrate. See the discussion of the materials thereof – see descriptions of figures 5 –9.

The examiner is interpreting the iron-garnet ferrite as the garnet recording layer. Note also the description of the undercoating layer in fig. 8 as well as the protective transparent layer 25.

With respect to the limitations of claim 2, because the item in Machida is used as a recording medium, and in such items, information is recorded thereon in "tracks", the examiner considers such a limitation if not inherent then obvious over known recording formats which place information into tracks.

10. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Machida as applied to claims 1 and 11 above, and further in view of JP 5-303776.

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The particular limitation of claims 3 and 12 are considered obvious over the above base references considered with JP 5-303776.

Placing grooves on the top of a mo record medium is taught in the JP document, and from such a teaching, provision of such grooves on the top reflecting film of Machida would lead to the limitation of claim 3, that is only the garnet recording layer is found between the tracks - in the groove section.

11. Claims 5, 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Machida, as applied to claim 1, above, and further in view of Nakamura et al.

Nakamura not only teaches the additional limitation of claim 5 with respect to the reflective material/layer and placement, but also to the groove capability.

It would have been obvious to one of ordinary skill in the art to modify the base reference of Machida with the teaching(s) from Nakamura et al motivation being to permit proper placement of a reflective layer for its inherent function as recognized by Nakamura et al. The additional groove ability is considered common practice in order to separate the information tracks.

12. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Machida further considered with Bechevet et al.

Claims 13 And 14 are interpreted as manufacturing steps wherein the novelty if any is in the temp. range.

Bechevet et al teaches in this environment the annealing temperature range of 600 – 650 C This anticipates the temp. ranges of claims 13 and 14.

The recording formation is considered present in the reference to Machida. No further analysis is made thereto.

It would have been obvious to one of ordinary skill in the art to modify the base reference of Machida with the teaching(s) from Bechevet et al, motivation being to permit fast annealing as taught by Bechevet et al.

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Okuno et al is cited as illustrative of another MO recording product having a spinel structure. Tailhades et al is cited as illustrative of another mo composite record having a spinel ferrite layer.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (703) 308-1598. The examiner can normally be reached on M-Thursday 8 - 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (703) 308-4825. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

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Aristoteles M Psitos
Primary Examiner
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December 18, 2001